USPS-RM2015-7/3
Public Materials Supporting Analysis By
Prof. Bradley of the Report of Dr. Kevin Neels

I. PREFACE

USPS-RM2015-7/3 contains the supporting materials for the analysis conducted by Professor Michael Bradley (on behalf of the Postal Service) regarding the Report of Dr. Kevin Neels (submitted March 18, 2015, on behalf of United Parcel Service).

II. ORGANIZATION

In addition to this Word (pdf) Preface, USPS-RM2015-7/3 consists of a zip file containing nine directories. The following pages provide the name, purpose, and contents of each directory. The logical starting point to review these materials is the detailed discussion presented in the **Analysis By Professor Bradley of The Report of Dr. Kevin Neels on Behalf of United Parcel Service**, which was filed in conjunction with the Postal Service's Reply Comments.

1. Directory – Estimating Regular Delivery Time Model on ZIP Code Averages

Purpose

This directory includes the SAS program, along with its log and output listing, used to estimate a version of the regular delivery time model on ZIP Code averages after the variables with insignificant coefficients were dropped.

Contents – Three Files

ZIP Average Model.Drop Insignificant Variables.sas
ZIP Average Model.Drop Insignificant Variables.log
ZIP Average Model.Drop Insignificant Variables.lst

2. Directory – Testing Omitted Variables Bias

Purpose

This directory includes the SAS program, along with its log and output listing, used to estimate a version of the regular delivery time including DOIS package volumes. It also includes the Excel workbook that calculates the test statistics used for testing for the presence of omitted variables bias.

Contents – Four Files

Replication.Reg Del Model.With Parcels.sas
Replication.Reg Del Model.With Parcels.log
Replication.Reg Del Model.With Parcels.lst
Tests for Omitted Variable Bias.xlsx

3. Directory –Testing Equality of Marginal Times from Regular Delivery Equation

Purpose

This directory includes the STATA program and output used to test for the equality of the complete set of marginal times from the regular delivery equation.

Contents – Two Files

Test for All MT Pairs.do
Test for All MT Pairs.pdf

4. Directory – Testing Equality of Volume Coefficients from Regular Delivery Equation

Purpose

This directory includes the SAS program, along with its log and output listing, used to test the hypotheses of equal coefficients on different volume variables. It also includes the Excel workbook that summarizes those tests

Contents – Four Files

Tests of Equality.Volume Coefs.sas
Tests of Equality.Volume Coefs.log
Tests of Equality.Volume Coefs.lst
Tests of Equality.Volume Coefficients.xlsx

5. Directory – Estimating Regular Delivery Model with Two Aggregate Volume Variables

Purpose

This directory includes the SAS programs, along with their logs and output listings, used to estimate two versions of the regular delivery time. The first version is a full quadratic model including two aggregate volume variables. The second version estimates the same model after the variables with insignificant coefficients are dropped. Both versions include tests of the equality of marginal times for the two volume variables.

Contents – Six Files

Estimate HVLV Model.Test MT.sas
Estimate HVLV Model.Test MT.log
Estimate HVLV Model.Test MT.lst
Estimate Reduced HVLV Model.Test MT.sas
Estimate Reduced HVLV Model.Test MT.log
Estimate Reduced HVLV Model.Test MT.lst

6. Directory – Calculating Impact of Different Delivery Models on Unit Costs

Purpose

This directory contains the Excel workbooks that are used to calculate the impact of two different variability models on unit costs. The two models analyzed are 1) a version of the regular delivery model in which volumes have been aggregated into two groups, and 2) a total street time model including DOIS parcels. There is one workbook for each of the two scenarios, and each workbook is a version of CS06&07 reflecting the respective model changes. Both scenario workbooks make use of a common input workbook called I_Forms_Proposal_13_Scenarios. The unit cost impacts are presented for each of the two scenarios, along with the original Proposal 13 model impacts, in Cost_Impacts_Proposal_13_Scenarios.

Contents – Four Files

I_Forms_Proposal_13_Scenarios.xlsx
CS06&7_Proposal_13_AggregateVariability.xlsx
CS06&7_Proposal_13_StreetTimeVariabilities.xlsx
Cost_Impacts_Proposal_13_Scenarios.xlsx

7. Directory – Estimating Unrestricted Constant Elasticity Model

Purpose

This directory includes the SAS program, along with its log and output listing, used to estimate an unrestricted version of the constant elasticity model.

Contents – Three Files

Constant Elasticity Model.NPV and PV Separate.sas
Constant Elasticity Model.NPV and PV Separate.log
Constant Elasticity Model.NPV and PV Separate.lst

8. Directory – Testing for Heteroscedasticity in Original Constant Elasticity Model

Purpose

This directory includes the SAS program, along with its log and output listing, used to test for heteroscedasticity in the original constant elasticity model.

Contents – Three Files

Constant Elasticity Model.Test Hetero.sas
Constant Elasticity Model.Test Hetero.log
Constant Elasticity Model.Test Hetero.lst

9. Directory – Estimating Improved Version of Constant Elasticity Model

Purpose

This directory includes the SAS program, along with its log and output listing, used to estimate an improved version of the constant elasticity model.

Contents – Three Files

Constant Elasticity Model.Corrected.Pooled.sas
Constant Elasticity Model.Corrected.Pooled.log
Constant Elasticity Model.Corrected.Pooled.lst